CLAIMS:

1. A method of moulding materials in which a mould is used having a plurality of mould components with moulding surfaces together defining a moulding cavity, said method comprising the step of forming at least part of the mould components of a polymerisable material and polymerising said material under polymerisation conditions, characterized in that, the starting material before polymerisation is a polymerisable compound of the formula:

## Z-X-Y

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Y, Z= O R=CH<sub>3</sub>, H, Cl, F, CN

O (CH<sub>2</sub>)<sub>n</sub>H n=0-3

$$n = 0-3$$
 $R = phenyl, CH3$ 

 $X= (CRR'_n)A(CRR')_m$  R,R'=H, alkyl; n,m=0-3

 $A=C_nF_{2n}$ , linear or branched, n=4-20

A= combination of perfluorinated aromatic and aliphatic stru

$$C_nF_{2m} \xrightarrow{F} C_nF_{2m}$$

$$C_nF_{2m} \xrightarrow{F} C_nF_3$$

$$F \xrightarrow{F} C_nF_{2m}$$

$$C_nF_{2m} \xrightarrow{F} C_nF_3$$

10 wherein

Z and Y independently represent polymerisable groups.

2. A method according to claim 1, characterized in that said polymerisable groups Z and Y are independently chosen from the groups consisting of (meth)acrylate,

oxetane, glycidylether, allylether, epoxy, vinylether and vinylester, or mixtures thereof, wherein Z or Y can be also a thiol group in combination with other radically polymerisable monomers in such a way that crosslinked polymers are obtained.

- A method according to anyone of the preceding claims, characterized in that the starting material is 2,2'-(2,2,3,3,4,4,5,5-octafluoro 1,6-hexanyloxymethyl)diepoxide, wherein both Y and Z are glycidylether groups.
- 4. A method according to anyone of the preceding claims, characterized in that

  the starting material is 2,2,3,3,4,4,5,5-octafluoro 1,6-hexanediol-dimethacrylate wherein both

  Y and Z are methacrylate groups.
  - 5. A method according to anyone of the preceding claims, characterized in that the F/C-ratio (Fluoro-Carbon ratio) of said polymerisable compound should be higher or equal to 8/14.

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- 6. A method according to anyone of the preceding claims, characterized in that the moulding cavity being shaped for moulding an optical component therein.
- 7. A method of moulding materials in which a mould is used having a plurality of mould components with moulding surfaces together defining a moulding cavity, said method comprising the step of forming at least part of the mould components of a polymerisable material, polymerising said material for forming the mould, filling the moulding cavity with a mixture of moulding material, applying UV-light or heat to said moulding material in the mould to set or cure the moulding material, continuing the UV-light or heat treatment until sufficient stiffness has developed in the moulded article and removing the moulded article thus made from the mould, wherein said mould is made of polymerising a polymerisable compound of the formula

Y, Z= 
$$O \longrightarrow R = CH_3$$
, H, Cl, F, CN

 $O \longrightarrow C$ 
 $O$ 

X= (CRR',)A(CRR'), R,R'=H, alkyl; n,m=0-3

A=C<sub>n</sub>F<sub>2n</sub>, linear or branched, n=4-20

A= combination of perfluorinated aromatic and aliphatic stru

$$C_nF_{2m} \xrightarrow{F} C_nF_{2m}$$

$$C_nF_{2m} \xrightarrow{F} C_nF_3 \xrightarrow{F} C_nF_{2m}$$

$$C_nF_{2m} \xrightarrow{F} C_nF_3 \xrightarrow{F} C_nF_{2m}$$

wherein

Z and Y independently represent polymerisable groups.

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- A method according to claim 7, characterized in that said polymerisable 8. groups Z and Y are independently chosen from the groups consisting of (meth)acrylate, oxetane, glycidylether, allylether, epoxy, vinylether and vinylester, or mixtures thereof, wherein Z or Y can be also a thiol group in combination with other radically polymerisable monomers in such a way that crosslinked polymers are obtained.
- 9.
- A method according to anyone of the claims 7-8, characterized in that the starting material is 2,2,3,3,4,4,5,5-octafluoro 1,6-hexanediol-dimethacrylate wherein both Y and Z are methacrylate groups.

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A method according to anyone of the claims 7-9, characterized in that the 10. starting material is 2,2'-(2,2,3,3,4,4,5,5-octafluoro 1,6-hexanyloxymethyl)diepoxide wherein both Y and Z are glycidylether groups.

11. A method according to anyone of the claims 7-10, characterized in that the F/C-ratio (Fluoro-Carbon ratio) of said polymerisable compound should be higher or equal to 8/14.

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- 12. Optical components obtained according to a method as disclosed in anyone of the claims 7-11.
- 13. A mould for making optical components comprising a plurality of mould

  10 components with moulding surfaces together defining a moulding cavity, wherein said mould

  is obtained by polymerising a mixture comprising, as a main constituent thereof, a

  polymerisable compound of the formula:

Y, Z= 
$$O \longrightarrow R = CH_3$$
, H, CI, F, CN  
 $O \longrightarrow O$   
 $O$ 

X= ( CRR7 ,)A( CRR7 ) $_{\rm in}$  R,R'=H, alkyl; n,m=0-3

A=C<sub>n</sub>F<sub>2n</sub>, linear or branched, n=4-20

A= combination of perfluorinated aromatic and aliphatic stru

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wherein

Z and Y independently represent polymerisable groups.

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- 14. A mould according to claim 13, characterized in that said polymerisable groups Z and Y are chosen from the group consisting of (meth)acrylate, oxetane, glycidylether, allylether, epoxy, vinylether and vinylester, or mixtures thereof, wherein Z or Y can be also a thiol group in combination with other radically polymerisable monomers in such a way that crosslinked polymers are obtained.
- 15. A mould according to claims 13-14, characterized in that the starting material is 2,2,3,3,4,4,5,5-octafluoro 1,6-hexanediol-dimethacrylate wherein both Y and Z are methacrylate groups.
- 16. A mould according to anyone of the claims 13-15, characterized in that the starting material is 2,2'-(2,2,3,3,4,4,5,5-octafluoro 1,6-hexanyloxymethyl)diepoxide wherein both Y and Z are glycidylether groups.
- 15 17. A mould according to anyone of the claims 13-16, characterized in that the F/C-ratio (Fluoro-Carbon ratio) of said polymerisable compound should be higher or equal to 8/14.
- 18. A mould according to anyone of the claims 13-17, characterized in that the shape of the mould being spherical or a-spherical made of said polymerisable material wherein the aspect ratio of the layer thickness made of said material can be as large as 50.